## ABSTRACT OF THE DISCLOSURE

A high-pressure processing apparatus for supplying a pressure medium into a high-pressure processing chamber 4, which is formed in a pressure vessel 1 to treat a workpiece at a high pressure, is provided. The pressure vessel 1 includes a first vessel section 2 and a second vessel section 3, which can be separated from each other in the axial direction, wherein the high-pressure processing chamber 4 is formed between the first and second vessel sections 2 and 3. Furthermore, a face seal section 5 for tightly sealing the high-pressure processing chamber 4 is formed in the abutment of the first and second vessel sections 2 and 3. A press apparatus 7 for providing an axial force to the face seal section 5 is disposed and the press apparatus 7 has a space 15 for storing a supplementary apparatus, such as a stirrer or the like at a position corresponding to the axial center of the pressure vessel 1. Such a structural arrangement allows a face seal type high-pressure processing apparatus to be realized, onto which the supplementary apparatus, such as a stirrer or the like, can be mounted.